



COPY OF PAPERS  
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100

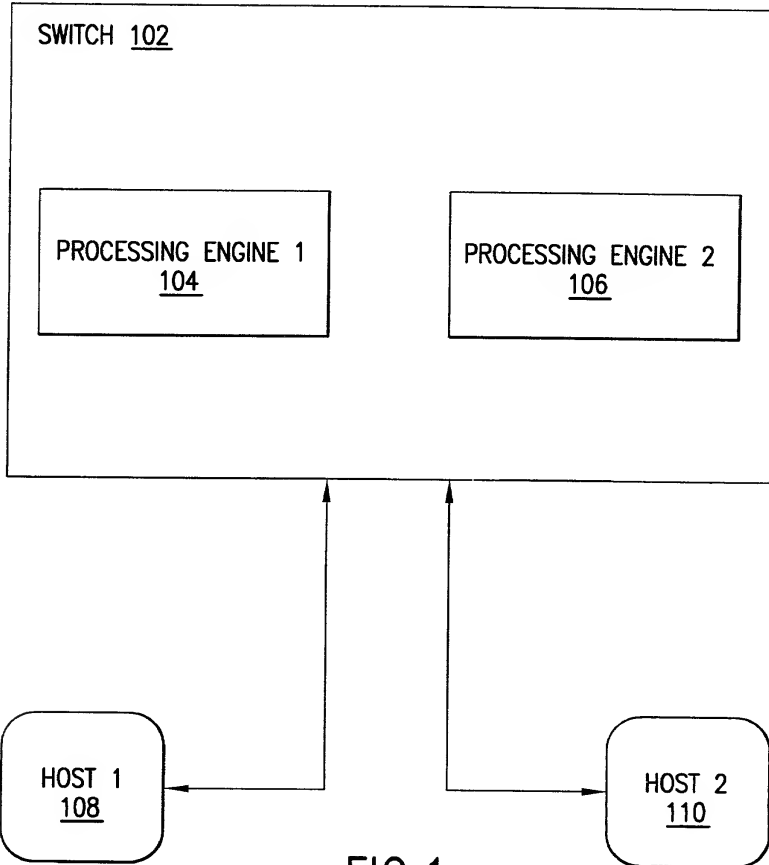


FIG. 1



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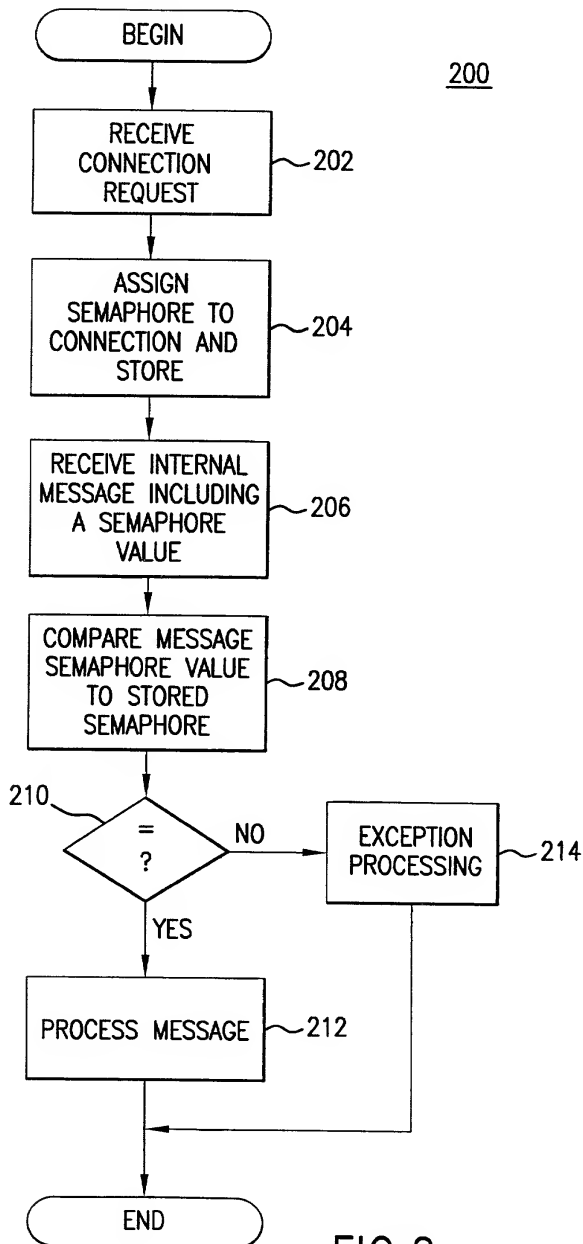
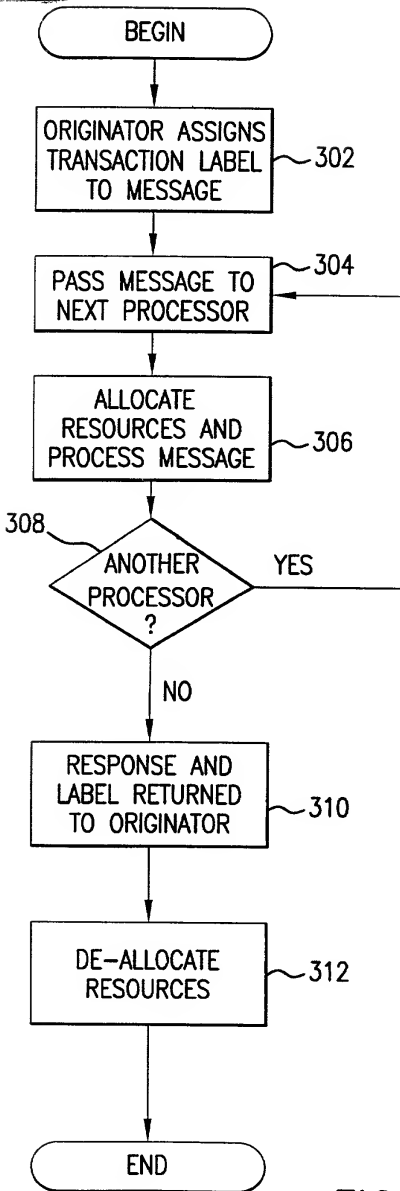


FIG.2



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300

FIG.3

400



**FIG. 4**



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500

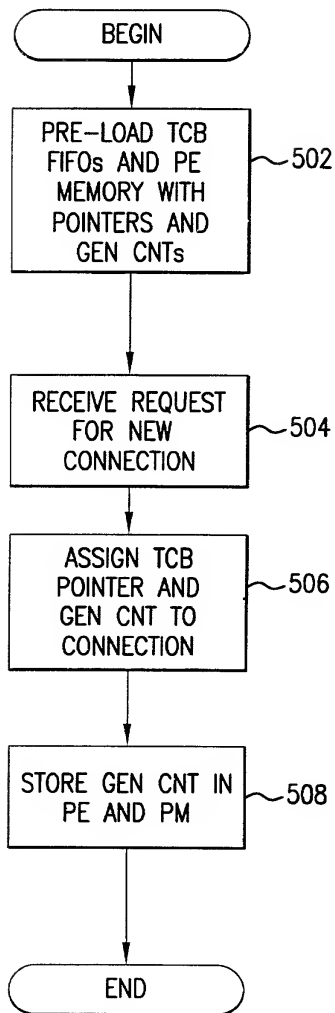


FIG.5



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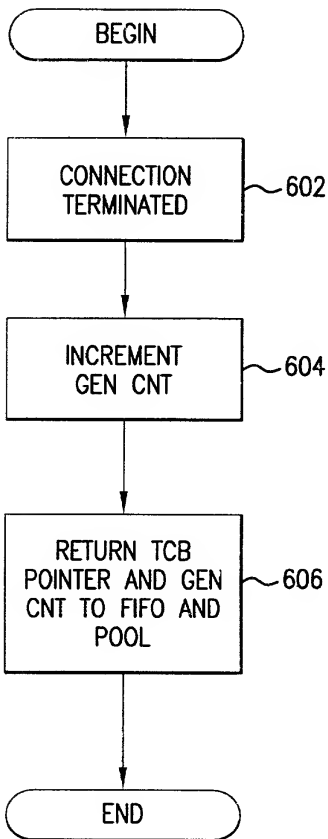


FIG.6



## NEW CONNECTION

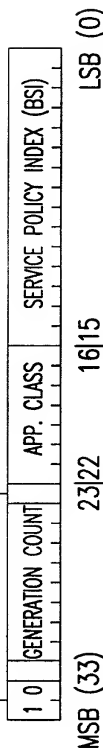
## PACKET CODES



MSB (33)

## PACKET CODES

RESERVED (1 b0)



MSB (33)

ELEMENT	BITS	DESCRIPTION
PACKET CODES	2	2'b11: INVALID/RESERVED (FOR TIMESTAMP, FORMAT TBD). 2'b01: START OF PACKET: {NEW, &TCB} 2'b10: END OF PACKET: {APPLICATION CLASS, SERVICE POLICY INDEX} 2'b00: INVALID/RESERVED.
NEW CONNECTION	1	LOGIC 1 INDICATES A NEWLY ESTABLISHED CONNECTION; LOGIC 0 INDICATES A "CAM HIT" ON A CURRENTLY ACTIVE CONNECTION.
RESERVED	AS NEEDED	LOGIC 0; RESERVED
&TCB	24	POINTER TO A FLOW TCB OR A CLIENT TCB OR A RST/DRP/IGN POINTER.
GENERATION COUNT	8	NUMBER OF TIMES THIS & TCB HAS BEEN RECYCLED.
APPLICATION CLASS	7	APPLICATION CLASS FIELD FROM SERVICE LOOKASIDE CAM.
SERVICE POLICY INDEX	16	SERVICE POLICY INDEX FROM SERVICE LOOKASIDE CAM (a.k.a. "BSI").

FIG. 7A



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6-BIT PACKET TAGS		64-BIT PACKET DATA	
SOM	COM	&xTCB	PROTO
SPM	NOP	tlabel	SERVICE POLICY
SHM	NOP	RESERVED	GENCNT
EOM	NOP	DEST IP ADDRESS	SRC IP ADDRESS
			RESERVED
			SERVER INDEX
			HISTORY POINTER
			SRC PORT #
			DEST PORT #

SERVICE POLICY IS A 22-BIT QUANTITY;  
 BIT NUMBER 57 IN THE UPPER SPM RESERVED FIELD IS USED TO INDICATE THE CLIENT FLAG;  
 tlabel IS A 6-BIT TRANSACTION LABEL TO BE RETURNED TO PAKMAN UPON COMPLETION OF COM;  
 ALL OTHER DATA FIELDS ARE ALIGNED ON 8-BIT BOUNDARIES AS INDICATED BY THE | MARKS.

FIG.7B-1

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### MARKER PACKET QUEUE TAGS SUMMARY

ENCODING	BITS	DESCRIPTION
SOM	6	START OF MARKER PACKET: &TCB + PROTOCOL + Src IP ADDRESS
SPM	6	SERVICE POLICY MARKER: CLIENT FLAG + 22-BIT SERVICE POLICY + 16 BIT SERVER INDEX.
SHM	6	SERVICE HISTORY MARKER: 32-BIT RESERVED FIELD + 32-BIT HISTORY POINTER
EOM	6	END OF MARKER PACKET: DEST IP ADDRESS + Src AND DEST PORTS
COM	6	COMMAND: OPTIONS APPEAR IN TABLE 5-2 BELOW; USUALLY DELETE.
NOP	6	LOGIC 0; RESERVED; IGNORE PACKET DATA AND MESSAGE TAGS

### MARKER PACKET QUEUE COM OPTIONS SUMMARY

ENCODING	BITS	DESCRIPTION
ADD	6	ASSOCIATE THE &xtCB WITH THE 5-TUPLE KEY, AND RETURN THE TRANSACTION LABEL BACK TO PAKMAN.
DEL	6	DELETE THE ASSOCIATION OF THE 5-TUPLE KEY. (&xtCB NOT REQUIRED) RETURN THE TRANSACTION LABEL BACK TO PAKMAN.
PASS	6	SEND DELETE DATAGRAM TO PE, BUT DO NOT CHANGE STATE OF BLT CAM's.
NOP	6	LOGIC 0; RESERVED

FIG.7B-2

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- BLT -- PE POST FORMAT FOR DELETE THE CONNECTION

33 32/31 30/29 24/23 16 0

SOP	CMD	TLABEL	&TCB	
MOP	GEN_CNT			SERVICE POLICY
MOP	TIP			
MOP	SERVICE INDEX		TP	
EOP			HISTORY Ptr	

POSTED WRITE DATA ELEMENT SUMMARY

ELEMENT	BITS	DESCRIPTION
CMD	2	CMD 1 SERVER DELETE
		CMD 2 CLIENT DELETE
TLABEL	6	LABELS FOR ADD OR DELETE
SERVICE POLICE	22	SERVICE POLICE INDEX FOR MAPPING TO SERVER IP ADDRESS
SERVER INDEX	16	ADDRESS POINTER TO LOCATE THE SERVER TABLE
TIP	32	TALISMAN'S IP ADDRESS
TP	16	TALISMAN'S PORT
&TCB	24	TCB ADDRESS POINTER
TIME STAMP	32	TBD

FIG.7C-1

20250404 00000000



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BLT - PE POST FORMAT FOR NEW SERVICE

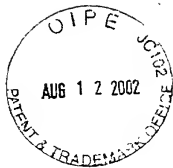
33	32/31	30/29	23/22	16/15	0
01	SOP	CMD	RESERVED	CLASS	SERVICE POLICY
00	MOP	SrcIP			
00	MOP	GEN_CNT	&fTCB		
10	EOP	RESERVE		SrcPORT	

- POSTED WRITE DATA ELEMENT SUMMARY

ELEMENT	BITS	DESCRIPTION
CMD	2	CMD - 0 &fTCB, NEW SERVICE
SERVICE POLICE	16	SERVICE POLICE INDEX FOR MAPPING TO SERVER IP ADDRESS
SrcIP	32	CLIENT IP ADDRESS THAT REQUEST FOR SERVICE
&fTCB	24	FLOW TCB ADDRESS POINTER
TIME STAMP	32	FOR TRACKING THE PACKET INSIDE EACH BLOCK. TBD

FIG.7C-2

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NEW PACKET					33	32/31	30/29	24/23	0
SOP	CMD		NULL	&ftCB OR &sTCB					
MOP	&cTCB								
MOP	SrcIP								
MOP	TIP								
MOP	ServerIP								
MOP	TPO		ServerPO						
MOP	Tsequence								
MOP	MAC ADDRESS								
MOP	Vlan TAG		MAC ADDRESS (HIGH TWO BYTE)						
MOP	GEN_CNT		SERVER INDEX						
MOP			CS/BSI						
EOP			HISTORY POINTER						
FOR DELETE PACKET									
33	32/31	30/29	24/23	0					
SOP	CMD	TLABEL	&ftCB OR &sTCB						

FIG.7D



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# PM - EMU POST FORMAT

63 59

15

CMD	OPTIONS	TOTAL LENGTH	FIRST WORD
COMMAND			
OPTIONS			
TCB (128 BYTES)			
OPTIONAL DATA (UP TO BUFFER SIZE)			
TRANSACTION			

## PM COMMANDS TO EMU

COMMAND NAME	COMMAND FIELD	REQUIRED FIELDS
PM RESET	'h1	BUFFER NUMBER
PM LockSN	'h2	BUFFER NUMBER, GENERATION COUNT AND SEQUENCE NUMBER
PM READ	'h3	BUFFER NUMBER AND GENERATION COUNT
PM PURGE	'h4	BUFFER NUMBER
PM POST WITH DefAck	'h5	BUFFER NUMBER, GENERATION COUNT, SEQUENCE NUMBER, TCB AND DATA
PM POST	'h6	BUFFER NUMBER, GENERATION COUNT, SEQUENCE NUMBER, TCB AND DATA
PM POST WITH LockSN	'h7	BUFFER NUMBER, GENERATION COUNT, SEQUENCE NUMBER, TCB AND DATA

FIG.7E



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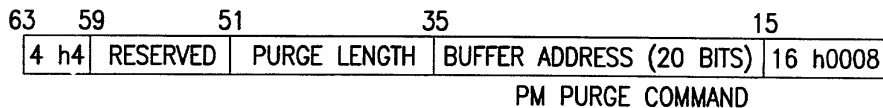
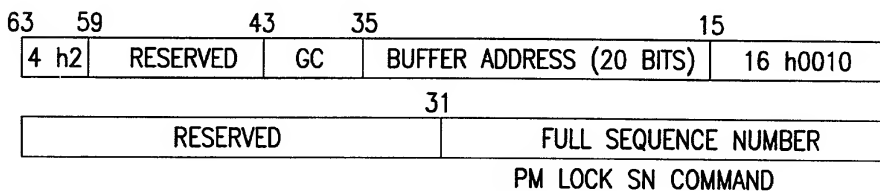


FIG.7F-1



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63	59	35	15
4 h6	SEQUENCE NUMBER [23:0]	GC	16 h0088 + DATA

39	31
RESERVED	FULL SEQUENCE NUMBER
TCB (128 BYTES)	
DATA (UP TO BUFFER SIZE)	

63	59	35	15
4 h5	SEQUENCE NUMBER [23:0]	GC	16 h0088 + DATA

39	31
RESERVED	FULL SEQUENCE NUMBER
TCB (128 BYTES)	
DATA (UP TO BUFFER SIZE)	

63	59	35	15
4 h7	SEQUENCE NUMBER [23:0]	GC	16 h0088 + DATA

39	31
RESERVED	FULL SEQUENCE NUMBER
TCB (128 BYTES)	
DATA (UP TO BUFFER SIZE)	

PM POST WITH DEFERRED ACK COMMAND

FIG.7F-2



[illegible]

**FIG. 9**

